



CYM74C430

Intel® 82430FX PCIs et Level II Cache Module

Features

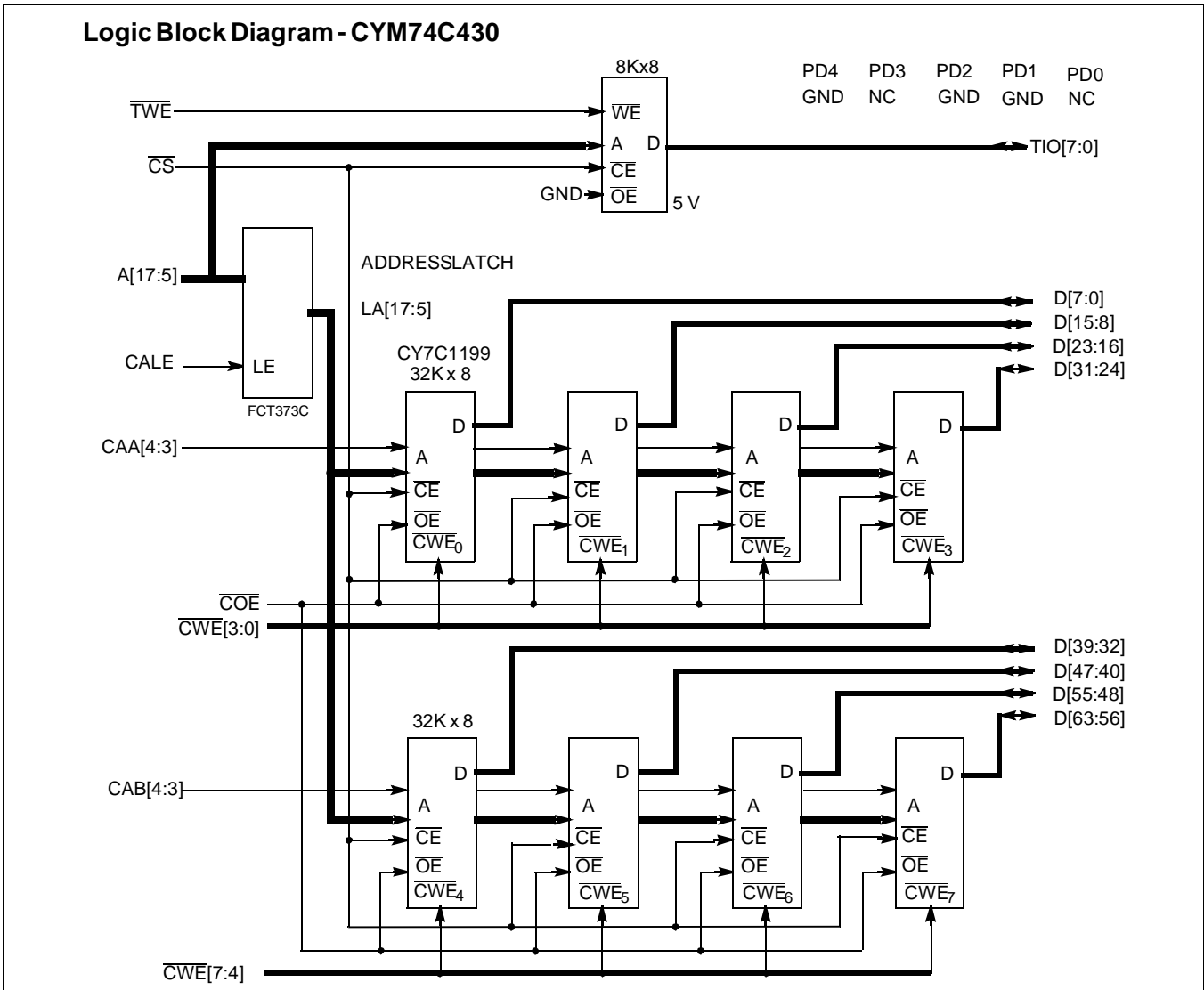
- Pin-compatible secondary cache module family that adheres to the Intel® COAST 1.2 specification
- Asynchronous (CYM74C430) configuration with presence and configuration detect pins
- Ideal for Intel P54C-based systems with the 82430FX (Triton™) chipset
- Operates at 50, 60, and 66 MHz
- Uses cost-effective CMOS asynchronous SRAMs.
- 160-position Burndy DIMM CELP2X80SC3Z48 connector
- 3.3V compatible inputs/data outputs

Functional Description

This secondary cache module is designed for Intel P54C systems with the 82430FX (Triton) chip set. CYM74C430 is an asynchronous 256-Kbyte cache module that provides a low-cost, high-performance solution using 5V SRAMs with outputs clamped to 3.3V.

The CYM74C430 is organized as 32K by 64 data with an 8Kx8 tag that supports 3-2-2-2 reads and 4-2-2-2 writes at 66 MHz. Multiple ground pins and on-board decoupling capacitors ensure high performance with maximum noise immunity.

All components on the cache module are surface mounted on a multi-layer epoxy laminate (FR-4) substrate. All inputs and data outputs are (3.3V) TTL compatible. The contact pins of the module are plated with 150 micro-inches of nickel covered by 30 micro-inches of gold.



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Pin Configuration
**Dual Read-Out SIMM (DIMM)
Top View**

GND	81	1	GND
TIO ₁	82	2	TIO ₀
TIO ₇	83	3	TIO ₂
TIO ₅	84	4	TIO ₆
TIO ₃	85	5	TIO ₄
RSVD	86	6	RSVD
V _{CC}	87	7	NC
RSVD	88	8	TWE
CAA ₄	89	9	CAA ₃
GND	90	10	GND
COE	91	11	CWE ₄
CWE ₅	92	12	CWE ₆
CWE ₇	93	13	CWE ₀
CWE ₁	94	14	CWE ₂
V _{CC}	95	15	NC
CWE ₃	96	16	CAB ₄
CAB ₃	97	17	NC (GWE)
CALE	98	18	NC (BWE)
GND	99	19	GND
RSVD	100	20	A ₃
A ₄	101	21	A ₇
A ₆	102	22	A ₅
A ₈	103	23	A ₁₁
A ₁₀	104	24	A ₁₆
V _{CC}	105	25	NC
A ₁₇	106	26	A ₁₈
GND	107	27	GND
A ₉	108	28	A ₁₂
A ₁₄	109	29	A ₁₃
A ₁₅	110	30	NC
RSVD	111	31	CS
PD ₀	112	32	NC (ECS2)
PD ₂	113	33	PD ₁
PD ₄	114	34	PD ₃
GND	115	35	GND
NC	116	36	NC
GND	117	37	GND
D ₆₃	118	38	D ₆₂
V _{CC}	119	39	NC
D ₆₁	120	40	D ₆₀
D ₅₉	121	41	D ₅₈
D ₅₇	122	42	D ₅₆
GND	123	43	GND
D ₅₅	124	44	D ₅₄
D ₅₃	125	45	D ₅₂
D ₅₁	126	46	D ₅₀
D ₄₉	127	47	D ₄₈
GND	128	48	GND
D ₄₇	129	49	D ₄₆
D ₄₅	130	50	D ₄₄
D ₄₃	131	51	D ₄₂
V _{CC}	132	52	NC
D ₄₁	133	53	D ₄₀
D ₃₉	134	54	D ₃₈
D ₃₇	135	55	D ₃₆
GND	136	56	GND
D ₃₅	137	57	D ₃₄
D ₃₃	138	58	D ₃₂
D ₃₁	139	59	D ₃₀
V _{CC}	140	60	NC
D ₂₉	141	61	D ₂₈
D ₂₇	142	62	D ₂₆
D ₂₅	143	63	D ₂₄
GND	144	64	GND
D ₂₃	145	65	D ₂₂
D ₂₁	146	66	D ₂₀
D ₁₉	147	67	D ₁₈
V _{CC}	148	68	NC
D ₁₇	149	69	D ₁₆
D ₁₅	150	70	D ₁₄
D ₁₃	151	71	D ₁₂
GND	152	72	GND
D ₁₁	153	73	D ₁₀
D ₉	154	74	D ₈
D ₇	155	75	D ₆
V _{CC}	156	76	NC
D ₅	157	77	D ₄
D ₃	158	78	D ₂
D ₁	159	79	D ₀
GND	160	80	GND

Pin Definitions

Signal Name	Description
V _{CC}	5V Supply
GND	Ground
A[18:3]	Addresses from processor
CAA[4:3]	Lower two address bits for bank 0
CAB[4:3]	Lower two address bits for bank 1
CS	Chip Select
COE	Output Enable
$\overline{\text{CWE}}$ [7:0]	Byte Write Enables
CALE	Latch Enable
PD ₀ -PD ₄	Presence Detect output pins
D[63:0]	Data lines from processor
TIO[7:0]	Tag data bits
TWE	Tag Write Enable signal
NC	Signal not connected on module
RSVD	Reserved

Presence Detect Pins

MODULE	PD ₄	PD ₃	PD ₂	PD ₁	PD ₀
CYM74C430	GND	NC	GND	GND	NC

Selection Guide

	CYM74C430-50	CYM74C430-60	CYM74C430-65
Cache Size	256 KB		
System Clock (MHz)	50	60	66
RAM Type	Asynchronous 5V with outputs clamped to 3.3V		
Data RAM t _{AA}	20 ns	17 ns	15 ns
Tag RAM t _{AA}	30 ns	20 ns	15 ns

Maximum Ratings

(Above which the useful life may be impaired. For user guidelines, not tested.)

Storage Temperature -55°C to +125°C

Ambient Temperature with Power Applied -0°C to +70°C

5V Supply Voltage to Ground Potential..... -0.5V to +5.25V

DC Voltage Applied to Outputs in High Z State -0.5V to +4.6V

DC Input Voltage -0.5V to +4.6V

Output Current into Outputs (LOW)..... 20 mA

Operating Range

Range	Ambient Temperature	V _{CC}
Commercial	0°C to +70°C	5V ± 5%

Electrical Characteristics Over the Operating Range

Parameter	Description	Test Condition	Min.	Max.	Unit
V _{IH}	Input HIGH Voltage		2.2	V _{CC} + 0.3	V
V _{IL}	Input LOW Voltage		-0.5	0.8	V
V _{OH}	Output HIGH Voltage	V _{CC} =Min. I _{OH} = -4 mA	2.4		V
V _{OL}	Output LOW Voltage	V _{CC} =Min. I _{OL} = 8 mA		0.4	V
I _{CC}	V _{CC} Operating Supply Current	V _{CC} =Max., I _{OUT} =0 mA, f=f _{MAX} =1/t _{RC}		1600	mA

Ordering Information

Speed (MHz)	Ordering Code	Package Name	Package Type	Description	Operating Range
50	CYM74C430PM-50C	PM37	160-Pin Dual-Readout SIMM	Async 256 KB	Commercial
60	CYM74C430PM-60C	PM37	160-Pin Dual-Readout SIMM	Async 256 KB	Commercial
66	CYM74C430PM-66C	PM37	160-Pin Dual-Readout SIMM	Async 256 KB	Commercial

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Package Diagram

160-Pin Dual-Readout SIMM PM37

